FOREIGN AGRICULTURE

Harvesting palm fruit, Malaysia.

World Palm Oil Boom

August 11, 1975

Foreign
Agricultural
Service
U.S. DEPARTMENT
OF AGRICULTURE

FOREIGN AGRICULTURE

Vol. XIII • No. 32 • August 11, 1975

In this issue:

2 Price, Consumer Acceptance Factors in Palm Oil Boom By Ellen V. McGuire

5 Malaysia's Oil Palm Goal: Doubled Output in 5 Years By John S. DeCourcy

8 Brazil's 1975 Citrus Output Continues Long-Term Uptrend

9 Saudi Arabia's Horticulture By John B. Parker, Jr.

10 China's Livestock Objectives Differ From Those of West By Harold C. Champeau

14 Soviet Trade Highlights

16 Food Samples Big Draw at Warsaw Show

17 Crops and Markets

20 Denmark's Tariffs Check Buying of U.S. Tobacco

This week's cover:

Harvesting mature fresh fruit bunches from younger (5-6 years) oil palms in Malaysia, where outturns of palm oil are expected to double in the next 5 years. See reports on world production (beginning this page) and on Malaysian output (beginning on page 5).

Earl L. Butz, Secretary of Agriculture

Richard E. Bell, Assistant Secretary for International Affairs and Commodity Programs

David L. Hume, Administrator, Foreign Agricultural Service

Editorial Staff:
Kay Owsley Patterson, Editor
Patricia O. MacPherson, Beverly J. Horsley, G. H. Baker, Marcellus P. Murphy, Isabel A. Smith, John C. Roney.

Advisory Board:
Richard A. Smith, Chairman; Gordon O. Fraser, William Horbaly, Richard M. Kennedy, J. Don Looper, Larry B. Marton, Arthur Mead, Brice K. Meeker, Jimmy D. Minyard, George S. Shanklin.

The Secretary of Agriculture has determined that publication of this periodical is necessary in the transaction of public business required by law of this Department. Use of funds for printing *Foreign Agriculture* has been approved by the Director, Office of Management and Budget through June 30, 1979. Yearly subscription rate: $34.35 domestic, $42.95 foreign; single copies 70 cents. Order from Superintendent of Documents, Government Printing Office, Washington, D.C. 20402. Contents of this magazine may be reprinted freely. Use of commercial and trade names does not imply approval or constitute endorsement by USDA or Foreign Agricultural Service.

Price, Consumer Acceptance Factors in Palm Oil Boom

By ELLEN V. McGUIRE
Foreign Commodity Analysis, Oilseeds
Foreign Agricultural Service

WORLD production and trade in palm oil, a relatively low-cost commodity that is rapidly gaining consumer acceptance in shortening, margarine, and in salad and cooking oils, are projected to rise substantially during the next several years.

Outturns by 1980 are expected to be about 72 percent above the 2.5 million tons of 1974, and trade more than double that of the 1.4 million tons exported in 1974.

After a long period of slow growth, palm oil production rose rapidly from 1967 through 1974. During these 8 years, world output of palm oil increased by nearly 110 percent, or about 11 percent per year. The projected growth rate through 1980, although slightly less, is still considerable at 9 percent annually.

Accelerated production of palm oil resulted from extensive plantings of improved high-yield varieties of African oil palms, especially in Malaysia, Indonesia, and Ivory Coast. Large areas of oil palms were planted in the 1960's, and are still being planted in these countries as well as in other tropical and subtropical areas of the world.

The rate of palm oil production is expected to increase as a larger proportion of plantation acreage comes into bearing. New trees require 4-5 years before bearing fruit, and reach maximum yields about the 10th year. Trees remain commercially productive for 30-35 years.

Average palm oil yields per acre from the newer high-yield varieties surpass the average yield of other oil-bearing crops. Their yield at 2 tons or more per acre is five times greater than that of peanuts—the highest oil-yielding crop among oilseeds—and 25 times greater than the yield from cottonseed.

Palm oil's relatively high yield and low production cost (at one Malaysia plantation, production cost is only 4 cents per pound) suggest that increasing world output and trade in this commodity may have a significant effect on the U.S. fats and oils economy.

Export availabilities of palm oil by 1980 are expected to be increasing more rapidly than production, because consumption in producing countries is expected to rise only about 10 percent. World exports of palm oil in 1980 could be nearly 25 percent greater than total 1974 world production.

Malaysia clearly will be the world's largest producer and exporter of palm oil by 1980, with output by that time about 2.4 million tons. Production in Malaysia should account for about 55 percent of world output—about five to six times larger than that of any other country.

Sharp increases in palm oil production also are expected in Indonesia and Ivory Coast. Outturns in Zaire, however, are expected to continue their downtrend over the next 5 years. Although some increase in Zaire's output is possible by the mid-1980's as additional oil palm plantations come into production, most of the increase in outturns will be needed for home consumption, and the country may find it necessary to import edible oil to meet its domestic needs.

MALAYSIA'S exports already account for more than half of all world exports of palm oil, and its share of the world market is expected to increase further. By 1980, exports of palm oil from Malaysia could reach 2.3 million tons, nearly 2.5 times the 900,000 tons produced in 1974. If the expected export level is reached, Malaysia will account for nearly three-fourths of the 1980 world export total of 3.1 million tons.

Indonesia, the world's second largest exporter of palm oil, is expected to retain that position in 1980, followed by the Ivory Coast.

Production and exports elsewhere—mainly, Cameroon, Ghana, Sierra Leone, Dahomey, Angola, Togo, Co-

lombia and Ecuador—are expected to register modest gains by 1980. Combined production in these countries probably will reach 1.1 million tons, reflecting an average annual increase of about 30,000 tons per year. Exports from these countries by 1980 could total 160,000 tons—an increase of about 23,000 tons per year.

Imports of palm oil by major consuming countries in 1973 amounted to 1.2 million tons, compared with 1.1 million tons in 1972. European countries import and consume the major portion of palm oil entering world trade.

Through 1971, imports by European countries accounted for about three-fourths of world trade and in more recent years for more than 60 percent.

Europe's largest importers of palm oil include the United Kingdom, the Netherlands, and West Germany, followed by France, Italy, and Belgium-Luxembourg. In 1973, imports by these countries totaled 693,000 tons—about 95 percent of Europe's palm oil imports and 58 percent of total world trade.

West Malaysia and Indonesia were the principal suppliers of palm oil to these countries and to the United States. Zaire ships some palm oil to the Netherlands, and Singapore reexports palm oil to the United Kingdom.

In the past 2 years, larger quantities of palm oil have been imported by Asian countries. These markets—including Japan, Iraq, India, and Pakistan—accounted for 20 percent of world palm oil trade in 1973 and an estimated 25 percent in 1974.

The market potential of palm oil in Asian countries is expected to grow. Preference is given to palm oil because of its lower price and the nearness of these importing countries to major world suppliers. By 1980, imports by this area may account for 30 percent of world trade in palm oil.

Continuing shortages of edible oil in India and Pakistan, together with scarcities of foreign exchange in both countries, are expected to foster increased imports of palm oil. Both countries are experiencing increased demand for edible oil that is difficult to meet. Their accelerated rate of consumption is the result of rapid growth in population and higher personal income.

India's imports have covered only about 15 percent of the 1974/75 deficit in edible oil, estimated for this season at 400,000 tons. Oil consumed in India is mostly in liquid form, with about 15 percent of the available oil hydrogenated for use in vanaspati, a vegetable ghee.

Indupalma variety of African oil palm flourishes on Colombian plantation. Photo by Inter-American Development Bank.

To augment supplies of liquid edible oil, the Government of India has restricted use of peanut oil in vanaspati to a maximum of 25 percent.

A DECADE AGO, peanut oil accounted for 80-85 percent of the finished product. A minimum of 30 percent cottonseed oil is now required in the manufacture of vanaspati, and its use averages about 35 percent.

Other edible oils are limited to 10 percent, leaving 30 percent to be filled by imported oil. In recent years, the use of imported palm oil has increased, displacing higher priced soybean oil—mostly of U.S. origin.

Vanaspati production in India declined to 324,000 tons in 1974 from 431,000 in 1973 and 575,000 in 1972. At the 1974 level, vanaspati output was less than half the estimated total capacity of 700,000 tons. The decline in production in the past 2 years was caused by a continuing shortage of edible oil, high prices, and Government control of retail vanaspati prices.

When price control on vanaspati was removed in January 1975, production increased rapidly. One recent projection indicates that demand for vanaspati will reach 1.2 million tons annually by 1989.

The potential growth of palm oil utilization in Pakistan is even greater than that in India. Of the estimated 440,000 tons of edible oil slated for consumption in the 1974/75 season, 68 percent or 300,000 tons will be used in the manufacture of vanaspati, leaving 18 percent or 80,000 tons for other commercial and industrial use, and 14 percent or 60,000 tons for direct consumption as edible oil.

Pakistan's vanaspati industry consists of 56 manufacturing plants, of which 26 were nationalized in September 1973. The Government plans to build seven additional plants with a total capacity of 54,000 tons annually, increasing production from the 1975 level of 275,000 tons to nearly 330,000 tons per year. Although one plant is scheduled to go into production in October 1975, it will be 2 to 3 years before most of the plants begin operating on a regular basis.

In former years, Pakistan's vanaspati was manufactured entirely from soybean oil. Virtually all of this oil was of U.S. origin, purchased under Public Law 480 or for dollars. In 1974, the nationalized mills were instructed to mix 70 percent soybean oil and 30 percent cottonseed oil to minimize the use of hydrogen. (Larger quantities of hydrogen are required when vanaspati is produced entirely from soybean oil.)

In 1974, palm oil was imported at prices considerably below those for soybean oil, and the mills were instructed

to mix 15 percent palm oil with 85 percent other vegetable oils. Subsequently, the proportion of palm oil used was increased to 35 percent, and more recently to 50 percent.

The fact that palm oil is a semisolid fat, requiring less hydrogenation than other edible oils, undoubtedly was a factor leading to the Government decision to increase its use in vanaspati production. However, the quality of the product containing 50 percent palm oil is reported to be lower, and unless improved refining techniques are employed, the palm oil proportion may have to be lowered.

THE RAPID growth of palm oil consumption in European and Asian countries and the United States has been primarily in edible products—especially shortening, margarine, and vanaspati, and to a lesser extent in salad and cooking oils and other food products in domestic and export trade.

In many African countries, palm oil is fractionated into liquid and solid portions. The liquid portion of palm oil is marketed as table oil and the solid portion is used in production of soap and hardened cooking fats. This process, however, has not found acceptance in European countries or in the United States.

Nonfood uses of palm oil are relatively small, and so far have shown no growth potential. These uses include soap, candlemaking, fatty acids, and as a finishing flux in tinplating.

Increased utilization of palm oil is expected to be predominantly in edible products, with consumption rising rapidly in the developing countries, where demand appears to be strongest because of increasing population and lack of local self-sufficiency in production of fats and oils.

U.S. imports and consumption of palm oil have increased sharply in recent years, and this upward trend is expected to continue—thus offering more competition to domestically produced soybean and cottonseed oils. U.S. palm oil imports rose from 141 million pounds in calendar 1970 to 442 million in 1974, and may reach 700 million in 1975. In the same 5-year span, domestic consumption of palm oil that totaled 125 million pounds in 1970 had increased to nearly 400 million by 1973, but declined slightly to 375 million in 1974. During 1975, palm oil consumption is forecast to increase to 650 million pounds, or slightly more than 3 pounds per person.

U.S. exports and reexports of palm oil ranged between 22 and 38 million pounds from 1972 through 1974. Most of this oil was shipped to Canada.

The rapid growth in palm oil consumption in the United States has been entirely in edible products, with use in shortening accounting for about 88 percent of total consumption. Palm oil also is used in margarine, potato chip frying, speciality products, and in nonfood items.

For technical reasons, palm oil—a semisolid fat—has not made much headway in the liquid edible oils market, but competitive palm oil prices could enhance its position in margarine manufacture, which to date has used relatively small quantities of imported palm oil.

Palm oil established its hold in the shortening industry about 10 years ago, when cotton acreage was reduced to about 50 percent of its former size and cottonseed oil production declined from nearly 2 billion pounds in 1960-65 to 1.3 billion in 1966 and to only 1 billion pounds in 1967.

Supplies of cottonseed oil stearine—widely used in shortening manufacture—became alarmingly low, and palm oil was imported to offset this shortage. Palm oil's usage in shortening has increased more than 10 times from the relatively modest 61 million pounds consumed in 1967.

Another factor that has favored U.S. consumption of palm oil has been the world market price situation. Exceedingly high prices of edible vegetable oils prevailed in all world markets from mid-1973 until the spring of 1975.

As world supplies of edible oils became more plentiful in 1975 after the better oilseed harvests of 1974, prices of edible oils tended to moderate. During the period of tight world supplies, palm oil production—little affected by drought or other adverse weather conditions—continued to increase.

Palm oil prices, responding to strong world demand, increased accordingly, but not to the same extent as other preferred edible oils. During the period of exceedingly high world market prices, palm oil became "a good buy," and continues to hold that position today.

The U.S. fats and oils industry has been discriminating in its use of palm oil, confining usage to areas where real shortages existed. First, there was the shortage of cottonseed oil stearine, and more recently an extremely tight edible oil situation that resulted from a strong upsurge in exports of oilseeds and oils because of world shortages of these commodities in 1973. This situation was aggravated by a sharp drop in the 1974 soybean crop and declines in production of butter, lard, and edible tallow in 1973 and 1974.

Palm oil's use in shortening during these years allowed more soybean and cottonseed oil to be used in the manufacture of margarine and salad and cooking oils where domestic demand was strongest. Had palm oil not been used extensively in shortening manufacture, prices of other edible fats and oils products would have rocketed out of reach of most consumers. Also, no edible oil could have been made available for charitable and disaster-relief distribution under Title II of Public Law 480.

It was necessary, however, to curtail programs provided under Title I of Public Law 480 for the duration of the edible oil shortage. During this period palm oil made inroads into some Asian markets that previously had received large quantities of soybean oil under Title I of Public Law 480 and under commercial sales linked to Public Law 480 provisions.

INDIA AND PAKISTAN are foremost in this area, both having averaged soybean oil imports from the United States prior to the India-Pakistan conflict of more than 200 million pounds per year.

Vegetable oil exports made under Title I of Public Law 480 have been declining during the past 4 years as a result of high prices, short supplies, budget restrictions, and political considerations. India has received no oil under Title I since the 1970/71 marketing year, and Pakistan has received comparatively small quantities of soybean oil under Title I provisions. In the absence of incentives for these countries to purchase U.S. soybean oil, the void has been filled by belt-tightening and by palm oil.

This trend is expected to continue as long as favorable price differentials are maintained for palm oil (currently 7-8 cents per pound less than soybean oil) and as long as Public Law 480 soybean oil remains a comparatively unimportant factor. This trend could be reinforced by lower freight costs, close proximity of palm oil production areas,

Continued on page 13

Malaysia's Oil Palm Goal: Doubled Output in 5 Years

By JOHN S. DECOURCY
U.S. Agricultural Attaché
Kuala Lumpur

MALAYSIA PLANS to maintain its leading position in the world oil palm industry by increasing acreage 44 percent and output of palm oil by more than 100 percent within the next 5 years.

By 1979 Malaysia expects to have 1.8 million acres planted to oil palm, yielding 2.4 million long tons of palm oil. Over the next 5 years, the annual rate of new planting of oil palm is expected to average 110,000 acres per year, and the average annual increase in palm oil production is forecast at 265,000 tons during the same period.

To keep pace with ever-increasing production of palm oil, both the public and private sectors of the industry are continuously building requisite infrastructure facilities that will enable Malaysian palm oil to compete more effectively in the world fats and oils markets.

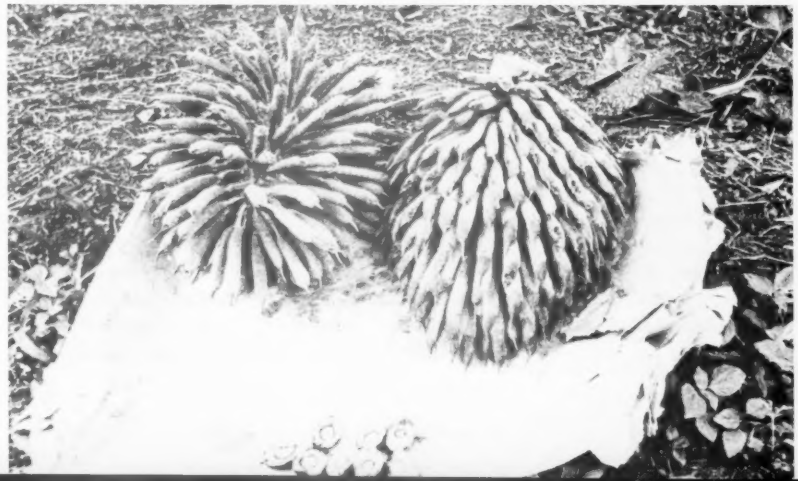
Increasing emphasis is being placed on production of higher quality crude palm oil, and on facilities for further refining of crude palm oil to encourage wider industrial end utilization of palm oil both at home and abroad.

Steps are being taken to maintain consistent high quality of crude and refined Malaysian palm oil in transit between production areas and overseas markets. Modern tank trucks, improved roads, new port areas, modern bulk storage complexes, and new ocean tankers are being put into service to expedite the movement and preserve quality of the products.

Malaysia also plans to establish a palm oil exchange to achieve greater control over merchandising of palm oil. As a part of the policy of greater national control, the Government plans to open a marketing office in San Francisco, California, this year.

Given continued favorable weather and steadily accumulating experience in cultivation and processing palm oil, Malaysia should have little difficulty

Right: Malaysian oil palm just over 3 years old, bearing its first fruit. Below: Harvesting mature fresh fruit bunches from trees 5-6 years old. Bottom: Male and female flowers of oil palm. Mature trees produce about 12 bunches of fruit per year. By 1979, Malaysia expects to have nearly 2 million acres planted to oil palm.



maintaining and strengthening its position as the world's principal source of palm oil.

The selective application of the export tax on palm oil in Sabah, however, could retard the growth of the industry and possibly cause a cutback in production in that State if the inequities persist. The export tax is becoming increasingly burdensome to Peninsular Malaysian growers as well. Oil prices have dropped, while production costs continue to rise.

ACCORDING to preliminary estimates, Peninsular Malaysia had 1,244,000 acres of oil palm at the end of 1974, compared with 1,036,000 acres a year earlier—an increase of about 20 percent. This increase was about 56 percent above the annual average acreage of the past 5 years. Just 10 years ago there were only 187,000 acres under oil palm in the entire country.

Preliminary estimates also indicate that Peninsular Malaysia produced 917,049 tons of palm oil in 1974, compared with 727,828 tons in 1973—an increase of 25 percent. Production in 1974 was about 74 percent above the most recent 5-year average. In 1964, total production was 120,106 tons—considerably less than the current year-to-year increases.

In addition to increased acreage reaching maturity, favorable weather and improved assisted-pollination techniques contributed to the larger output of palm oil in 1974. On the positive side, domestic recession, brought on by the slowdown in international trade, has helped check to some extent the rural exodus, assuring more adequate labor supplies.

Given continued price incentive, favorable weather, an expanding supply of skilled labor for plant pollination (the improved varieties of oil palm are relatively poor self-pollinators), and reduced migration from rural to urban areas, Malaysia should be able to sustain the upward production trend of 15-20 percent annually over the next 5 or more years.

Peninsular Malaysia exported 799,860 tons of palm oil in 1974, compared with 713,322 tons in 1973—an increase of 12 percent. Malaysian exports benefited from the generally tight market situation and correspondingly higher prices in major consuming countries. The main destinations of Malaysian palm oil for 1974 were Singapore, 248,016 tons; the Netherlands, 121,062; United States, 105,868; United Kingdom, 81,413; Iraq, 76,376; Japan, 53,028; and other destinations, 11,097.

Production of palm kernels in Peninsular Malaysia reached 189,064 tons in 1974, approximately 24 percent more than the 1973 outturn and 68 percent greater than the annual average output of the past 5 years. Given the increasing production of oil palm fruit from vastly expanded acreage, output of palm kernels can be expected to increase commensurately, since both palm oil and palm kernel are derived from the same fruit.

With establishment of an increasing number of factories for processing palm kernels into oil in recent years, Peninsular Malaysia stopped exporting palm kernels in 1973. Domestic production of palm kernels in Peninsular Malaysia is no longer sufficient to cover the needs of local mills processing palm kernels into oil.

As a result, Peninsular Malaysia has had to import palm kernels from Indonesia and Sabah. Imports of palm kernels total 21,470 tons in 1974, compared with 33,832 tons in 1973—a decline of about 37 percent. The drop can be attributed to reduced Indonesian supplies for export, as increasing quantities are being processed there. This source of supply is likely to dry up altogether as Indonesian domestic demand for palm kernels continues to increase.

Because of the limited number of mills processing palm kernels into oil, no official data on production of palm kernel oil in Peninsular Malaysia are available. However—assuming a 45 percent extraction rate, Peninsular Malaysia is estimated to have produced 95,000 tons of palm kernel oil in 1974, compared with 82,800 tons in 1973—an increase of about 15 percent.

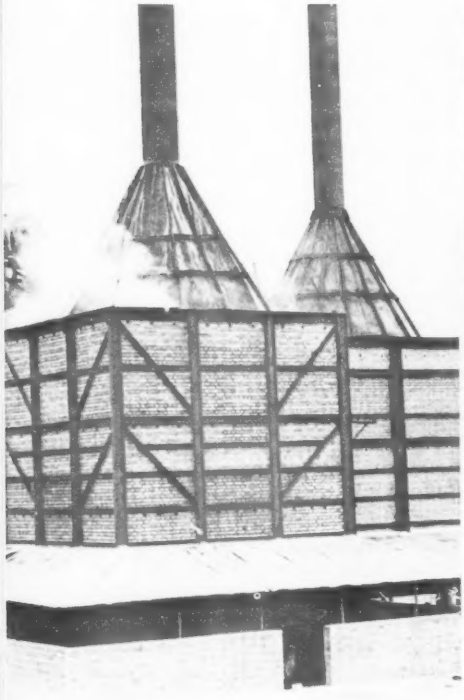
Peninsular Malaysia's exports of palm kernel oil, totaling 90,877 tons in 1974, were about 38 percent above the quantities shipped in 1973. Main destinations in 1974 were the United States, 41,369 tons; the United Kingdom, 20,320; the Netherlands, 12,294; Canada, 5,379; Singapore, 3,980; and other destinations, 7,535.

Imports of palm kernel oil were about 60 tons in 1974, compared with 248 tons in 1973.

Total area in coconuts in Peninsular Malaysia—about 520,000 acres—has remained fairly constant for some years. Of this acreage, the smallholding sector accounts for about 90 percent and the estate sector 10 percent. These acreages are not likely to show any significant increase in the foreseeable future because of the relatively poor returns compared with other tree crops, such as rubber and oil palm.

Because coconut growing is a way of life with a large segment of the indigenous population the Government has instituted a pilot coconut improvement scheme for the smallholder sector. Under this scheme 85,974 acres of se-

Above: Collecting harvested fresh fruit bunches along estate road in Malaysia. Top right: Oil palm fruit in rail hopper cars is sterilized under pressure with steam, after which fruit easily separates from bunches. Right: Bunches are then burned in special incinerator. Recovered ash contains about 40 percent potash, which is returned to the land. Far right: Fleshy pulp remaining after oil is removed is burned, producing steam to generate all electric power needs for the mill and estate. Palm kernels are shipped to special mills for oil extraction. Even the hulls of kernels have economic value, as they contain a high percentage of carbon.



lected coconut smallholdings have been revitalized since the inception of the program in 1965. Of this revitalized acreage, 18,551 acres have been replanted and 67,423 acres rehabilitated.

Increased productivity and higher earnings are now evident in revitalized coconut smallholding where growers practice improved husbandry, pest control measures, drainage, greater usage of fertilizer, and interplanting of diverse approved crops.

Copra output from rehabilitated smallholdings is estimated to average 1,000 pounds per acre per year, compared with 500 pounds from holdings outside the scheme. Plantation copra output ranges from 1,500 to 2,000 pounds per acre per year.

If proven successful under Malaysian conditions, a new coconut hybrid known as *mawa*—a cross between a Malaysian dwarf and a West African tall—should give a significant boost to an otherwise declining industry because of its high productivity.

Experimental planting of the *mawa* palm is now being carried out on a few estates, and yield possibilities are said to be more than double the present average.

Production of coconut oil in Peninsular Malaysia is estimated at 62,901 tons in 1974, compared with 77,058 tons in 1973—a decline of about 19 percent. The 1974 outturn was about 30 percent below the annual average level of output of the past 5 years.

The continuing decline of the coconut oil milling industry is mainly a result of the erratic supplies of both domestic and imported copra and the mounting competition from other vegetable oils. In the absence of massive aid to stimulate the industry as a whole, coconut oil milling will become an increasingly marginal venture. It is premature to forecast the effect of the *mawa* palm on the long-term outlook for the industry.

Peninsular Malaysia is estimated to have exported 43,667 tons of coconut oil in 1974, compared with 26,511 tons in 1973—an increase of about 64 percent and well above the average of recent years. High export prices and strong demand from Canada, the United Kingdom, the United States, the Netherlands, and Australia were responsible for the increase in exports.

Both the public and private sectors of Peninsular Malaysia are pursuing impressive programs to improve, expand, and construct new infrastructure facilities to keep pace with the rapid expansion of the palm oil industry. New highways, port facilities, and bulking plants are being built—largely with public funds—in remote areas where huge tracts of land are being developed for oil palm planting.

Through tax incentives, the Government is encouraging increased palm oil processing, including refining, bleaching, fractionation, and endproduct manufacture. Such products will be increasingly exported as future processing capacity is added.

In 1975, up to 200,000 tons of oil will be processed to some extent, but not more than 50,000 tons of this volume will be consumed in Malaysia. The balance will be exported. The present method of reporting supply and distribution data fails to account for exports of this partly processed oil. Malaysia's actual exports of palm oil thus are considerably higher than the official figures indicate.

Brazil's 1975 Citrus Output Continues Long-Term Uptrend

BRAZIL'S CITRUS crops are expected to set new records in 1975, continuing the general uptrend that started at least 6 years ago. Although there are no tentative countrywide production figures available for 1976, it is likely that, based on tree plantings, next year's output will also reach a new high.

Total orange output in 1975 is estimated at 4.4 million metric tons, with São Paulo—Brazil's major producing State—contributing 3.7 million tons (90 million boxes, 40.8 kg each). Estimated national production was 11 percent higher than the 3.9 million tons of the previous year, while São Paulo's output was expected to be 10 percent greater than the 3.3 million tons (82 million boxes) of 1974.

Tangerine production is expected to rise slightly in 1975 to 465,000 metric tons from 437,000 tons; production of lemons and limes should remain the same at 294,000 tons. Since most grapefruit are produced in São Paulo, its output can be taken for the national figure. In 1975 the total was 6,000 tons, compared with 5,900 tons in 1974.

"Expansion continues in Sao Paulo and Minas Gerais, where 40,000 new trees have been planted . . . For the 1976 Sao Paulo crop, the number of trees is expected to increase . . . to 61 million."

São Paulo's 1976 orange output is expected to be 4.3 million tons.

In 1969, the last year for which official Brazilian Government data are available, citrus output consisted of a 2.9-million-ton orange crop, a 229,000-ton tangerine output, and a lemon and lime crop of 53,000 tons. Data for subsequent years are based on São Paulo State Department of Agriculture studies and trade estimates.

Weather conditions in São Paulo were favorable throughout most of the 1975 growing season except for an unusually long dry period in the early spring. The good weather that followed compensated for the slow start and the high production level resulted.

Expansion continues throughout most of São Paulo's traditional citrus region and in southwestern Minas Gerais, where 40,000 new trees have been planted in the Frutal region in the last year alone.

Trees in production in São Paulo during the 1975 crop year are estimated at 53.6 million, nearly 22 percent more than the previous season's and about 37 percent more than in 1973.

For the 1976 São Paulo crop, the number of producing trees is expected to increase an additional 14 percent to 61 million.

The welfare of Brazil's citrus industry is closely tied to that of São Paulo's and the outlook for the latter was clouded at the beginning of the 1975 season.

The São Paulo orange industry had not recovered from the previous year's decline in juice sales to West Europe, Brazil's most important customer. The industry had also been jolted in the summer of 1974 when one of the State's major juice processors went bankrupt. Also, São Paulo processors and producers were at loggerheads over the price to be paid to farmers for 1975 crop oranges.

Producers were demanding the equivalent of about $1 per box, while processors were unwilling to pay over 82 cents. In an effort to persuade them to pay the higher rate, the Government reportedly offered to processors an increase in tax credits on juice exports from the current level of 16 percent to 28 percent. Because most of the processors' business is in the export market, while the tax credits would be applied against liabilities accruing from domestic sales, the processors were unwilling to accept the offer.

An estimated 2 million tons of 1974-crop oranges were processed by the São Paulo juice industry, yielding some 175,000 tons of juice concentrate (65° brix). About 2.2 million tons of fruit are expected to be utilized from the 1975 crop. Capacity of the industry is more than adequate to process this.

Official data of the Bank of Brazil's Foreign Trade Department (CACEX) show Brazil's calendar 1974 exports of orange juice were 108,400 tons, valued at US$59 million. A year earlier, exports amounted to 120,990 tons, worth almost $64 million.

Full-year 1974 orange juice export data by country are not yet available. But CACEX statistics for the first 7 months of the year show that Brazil's five most important customers in that period, with volumes in metric tons, and values in thousands (in parentheses), were: West Germany, 10,624 ($6,337); Sweden, 7,880 ($4,574); the Netherlands, 7,664 ($4,321); the United States, 2,449 ($1,091); and Canada, 1,578 ($917).

Shipments to West European countries in the January-July 1974 period were 28,622 metric tons, worth $16.6 million.

Data for all of 1973 show that orange juice exports by the five top customers, in metric tons, with value in thousands (in parentheses), were: West Germany, 55,291 ($29,215); the Netherlands, 26,064 ($13,786); Sweden, 10,381 ($5,402); the United States, 10,983 ($6,205); and Canada, 8,793 ($4,293).

Orange juice exports to West Europe in 1973 were 97,290 tons, valued at $51.2 million.

On a crop-year basis, juice exports last season amounted to about 160,000 tons, since an estimated 50,000-55,000 tons of the total were of 1974 juice exported in the January-April 1975 period. This is the first time Brazil's exports in the latter half of the season have been so heavy. Substantial increases in cold storage capacity in recent years (current nominal capacity is estimated at between 90,000 and 100,000 tons) enabled the processors to store the juice until it was shipped toward the end of the year.

Total orange juice exports for 1975, on a crop year basis, will have to be from 30,000 to 40,000 tons greater than those of the 1974 season if 1975 carryover stock is to be maintained at the same level estimated for 1974.

Brazil's exports of fresh citrus in the January-July 1974 period, by category (in metric tons), and value in thousands (in parentheses), were: Oranges, 3,476 ($499); tangerines, 144 ($20); lemons, 72 ($40); and grapefruit, 615 ($103).

—Based on report by
CHARLES J. O'MARA
U.S. Agricultural Officer, São Paulo

Saudi Arabia's Horticultural Output Booms Under Irrigation

By JOHN B. PARKER, JR.
Foreign Demand and Competition Division
Economic Research Service

ALTHOUGH SAUDI ARABIA is a desert country, its production of horticultural crops in oases and irrigated areas is rising rapidly, with output in some instances climbing fourfold or more since 1967.

Preliminary estimates indicate that Saudi production of vegetables rose from about 850,000 metric tons in 1967 to 2.3 million in 1974, while fruit output was up from 274,000 tons to 362,000. Dramatic gains in the production of watermelons and other melons, eggplant, pumpkins, and tomatoes have occurred during that period.

Saudi Arabia covers an area about the size of the United States east of the Mississippi River (minus Florida), but its arable cropland is only equal to the area encompassed by Delaware. Many oases, scattered from Jabrin in the south (near the Rub Al-Khali Desert) to Burayda in the center of the country, support date palm plantings. There are important oases near Dhahran, Mecca, Medina, and Jidda.

Vegetables are grown in irrigated areas—particularly in the central part of Saudi Arabia.

The Saudi Horticultural Experiment Station near Burayda has been instrumental in enabling farmers to boost output of horticultural crops. The Government is also studying the establishment of new experiment stations to serve as distribution centers for improved varieties of fruits and vegetables and the dissemination of information on improved farming techniques.

U.S. petroleum firms have played an important role in introducing improved varieties of vegetables to eastern Saudi Arabia.

Increased Government subsidies for fertilizer (now 50 percent of cost) and farm machinery have enabled farmers to reduce production costs, while accelerating consumer demand in the flourishing cities has pushed retail prices upward. As a result, producer incomes are booming from the sale of horticultural crops.

Watermelon sales are among those bringing in sizable profits. With production concentrated in the Al Qasim and Hail Emirates, high-yielding watermelon varieties from the United States are propagated under irrigation and with adequate fertilizer. Yields are high—up to about 17 tons per acre—with average profits at about US$1,000 per acre.

Watermelon exports by Saudi Arabia to Kuwait sell for about US$1 per 22-pound melon. Kuwait imports of these melons totaled $1.2 million in 1973, tripling in value by 1974. Watermelons not sold in Saudi cities or exported to nearby countries are used as alternative animal feed. In the summer, surplus melons are used to nourish sheep, goats, cattle, and camels that are sheltered from the sun at the country's oases. (Alfalfa, pumpkins, wheat straw, sorghum, and millet are also used to feed animals during the summer.)

Eggplant, cucumbers, and tomatoes are popular vegetables grown in central Saudi Arabia during the summer. Mild winters in some areas also allow these vegetables to be grown at that time.

Al Oasim Emirate, the leading watermelon-producing area, is also the major producer of eggplants, onions, and pumpkins. Mecca is the leading center for tomato and squash production and the third major grower of watermelons. Sales of small, sweet-melon varieties to tourists and Moslem pilgrims have increased in recent years in Mecca and Medina. Countrywide, watermelon production in 1974 was more than twice the 1967 level—output rose from 585,000 metric tons to 1.36 million tons last year.

Riyadh is the third largest producer of tomatoes and the second largest supplier of onions. Shoppers there can buy a wide assortment of vegetables during most of the year, except during July and August. Canned and frozen vegetables are used to supplement fresh fruit and produce from nearby gardens, especially in these months.

Farmers near Dhahran have boosted output of tomatoes, lettuce, cabbage, onions, and cucumbers. Most of the watermelons sold in the Dhahran-Al Khobar-Damman metropolitan areas are trucked from Burayda or Riyadh.

Farmers in southwestern Saudi Arabia specialize in sorghum and millet production, but they are beginning to grow more vegetables for the Jidda market. The Jizan area in the southwest receives more rainfall than any other part of the country—10-12 inches per year. Hence, prospects for growth of horticultural crop production are excellent.

Saudi Arabia is the world's third largest producer of dates, following Iraq and Egypt. Date output grew from 252,000 tons in 1970 to about 265,000 tons in 1973. Bedouins are often allowed to gather the entire output of dates from new groves planted at the oases during the first 5 years of growth, if they irrigate and care for the trees. After that time, owners of the trees get most of the dates.

NEW PLANTINGS of dates, mangoes, and almond trees are being used to landscape suburban areas near major cities and this output will swell total production. Fig groves have also been planted in oases near the Yemen border.

Orange groves have been planted in the last decade between Dhahran and Kuwait, near Riyadh, and along the Red Sea near Jidda. Banana plantings have also been made in oases along the Red Sea. Grapes thrive in irrigated valleys of the northern part of the Asir highlands and in some oases north of Riyadh. Pomegranates, almonds, and peaches are grown by some farmers in oases between Mecca and Tobuk.

Most of Saudi Arabia's apples—and plums and apricots—are grown in the Tobuk area near the Jordanian border, where the elevation is over 5,000 feet and snow blankets the orchards in winter. Total Saudi apple output is about 2,000 metric tons annually, but to meet the demand yearly imports of about 20,000 tons are made, mostly from Lebanon's orchards.

Saudi imports of fresh fruits—supplied mostly by Lebanon—increased from about $14 million in 1970 to almost triple that level in 1974. Lebanon remains the major supplier.

FIVE COMMUNES in the People's Republic of China

Part 4

China's Livestock Objectives Differ From Those of West

By HAROLD C. CHAMPEAU
U.S. Agricultural Officer
Hong Kong

LITTLE is really known about China's livestock sector—certainly less than is known about the crop sector of the economy.

Several points are clear, however:

- The main objectives for raising particular types of livestock are in some ways quite different from those in the West;
- Estimates of livestock numbers are believed to be totally unreliable, in part because such a large share of the total animal and poultry numbers is raised privately by workers and thus is not easily accessible for statistical compilation;
- Livestock feeding parctices vary greatly from the scientific, measurable, standard-component-type feeding in the United States.

It is not clear at some communes whether livestock raising is a main function of production or a sideline enterprise. Both descriptions were heard. Nor is it clear at which level the responsibility for livestock raising rests —commune, brigade, or team. It is likely that this responsibility varies from commune to commune and with the type of livestock or poultry raised.

In short, there are many unknowns concerning the livestock sector—the sector that makes such an important impact on the China scene as an indispensable source of fertilizer, draft power, industrial raw materials, food, income, and exports. The livestock sector also is a consumer of vast quantities of feed, some of which could readily be consumed directly by the population.

Information gained on livestock at the five communes visited is necessarily fragmentary, and does not pretend to shed much light on the major questions that may be raised concerning China's livestock economy, but it does offer glimpses of what is being done—and how—on a limited sampling of model communes.

Chairman Mao has ordered China's farm workers to raise one pig apiece as an easily remembered but highly ambitious statistical objective that is aimed more at increasing the output of manure than the production of pork.

Some of the communes visited had met that goal; others had not. At the Red Star China-Korea Friendship Commune, 1973 hog numbers reached 65,000[1]—well below the 80,000 member population of the commune. Of that number of hogs, 31,000 were sold to the Central Government. Also, hogs at that commune were raised at the commune level and primarily for breeding rather than for slaughter. The animals were sold to subordinate levels within the commune as well as to other communes where they were to be raised.

An official at the Horse Bridge Commune stressed that hog numbers were being sharply increased "to solve the fertilizer problem." This commune is ahead of its goal, with 49,000 hogs raised in 1973—one-third more than the membership and four times the number raised in 1957.

The Horse Bridge Commune has a good record in hog production—two litters a year, an average of 11 per litter, and a high survival rate. At 2 months, the pigs are sold to workers to be raised on their private plots. The workers, in turn, may either sell the mature pigs to the Central Government or keep them for their own use.

At the July 1 Commune, hog numbers—20,000 head in 1973—also exceeded the member population by 17 percent. That commune maintained a foundation herd of 1,500 head. Sows (bred at about 200 pounds) and piglets were both distributed to production brigades.

---

[1] **Statements on production and yields in this article are those of officials at the five communes visited by the author. FAS does not necessarily agree with data presented in this report. The facts and figures reported to the author by PRC officials are presented without analysis or comment.**

The Shanghai White breed produces two litters a year, averaging 11-12 offspring each. It is a meat-type hog, thin-skinned, not too fat, and its meat is well liked by the population. The hogs sold to the Central Government for slaughter in 1973 averaged 202 pounds liveweight.

Hog numbers at the Hua Tung Commune were limited in the past by the inability of the commune to grow sufficient feed. In the past decade, however, production has increased sharply and currently has exceeded the goal by 10 percent.

At the Lok Gang Commune, which is primarily engaged in fruit production, hog raising is restricted to farm workers' households, which averaged 2-3 hogs each. No hogs are raised at either the commune or brigade level. The stated objectives for hog raising at these two communes are for meat and for manure.

Cattle raising for milk production was noted in the north, but not in the south. At the Red Star China-Korea Friendship Commune, a herd of 3,200 black-and-white Nan Chiao dairy cows (strongly resembling the Holstein-Friesian breed) produce approximately 25.3 million pounds of milk annually.

Milking machines, connected to a network of pipes, collected the milk for eventual use in direct consumption or the production on the commune of butter, condensed milk, and powdered milk. This dairy farm obviously is an important one serving the Peking area.

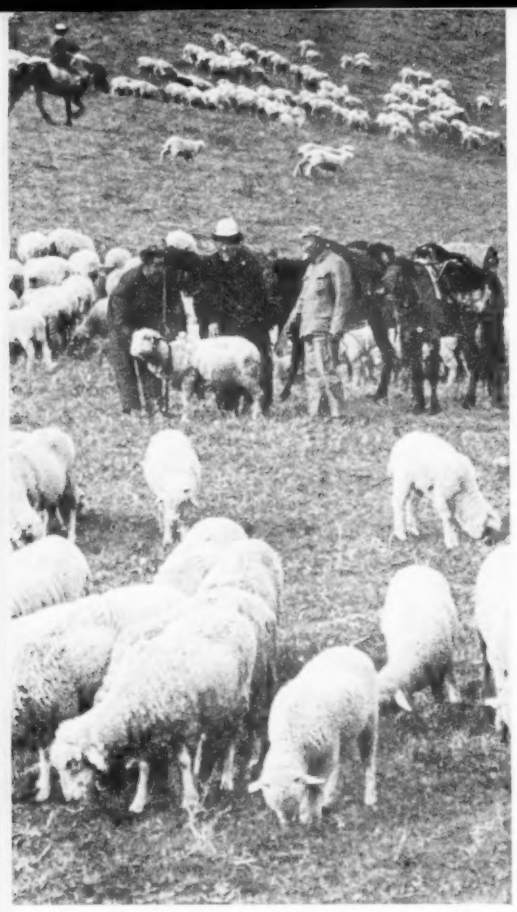
The Red Star China-Korea Friendship Commune has about 3,000 horses, which are used primarily for short-distance transport.

Black-and-white dairy animals also were noted at the Horse Bridge and July 1 Communes in the Shanghai area. At the Horse Bridge Commune, animals in the herd of 150 young (about 1.5 years), milk cows were a cross between the *Ho-lan* (Friesian) and Chinese native breeds. No information on the original source of the Western breed stock was obtained.

Artificial insemination alone was used in breeding. Some 80 of the 150 cows were producing milk, averaging 33 pounds per day. Part of the milk is distributed within the commune, but most goes to a Shanghai dairy.

At the July 1 Commune, some 60 black-and-white cows also yielded an

Night customers (top) in a 24-hour food market, Shanghai. Herders (above) checking on livestock. Stockbreeding official (left) of the East Wind Commune counsels herders in training to be veterinarians. Some of China's livestock and poultry are raised privately by workers.



Commune cadre members and herders on the range. China's major livestock numbers may exceed 500 million.

average of about 33 pounds of milk per day, with an annual average yield of 10,000 pounds per cow. There are reportedly four veterinarians at the commune level and 1-2 veterinarians at each brigade. It is not clear, however, what a "veterinarian" is at either level.

In the Canton area, there was no mention of dairy cattle or milk production. Livestock in that area are raised primarily for draft power, although the Hua Tung Commune had five cattle farms raising mainly Chinese yellow cattle for meat—in addition to 3,800 head of water buffalo used for draft power. The Lok Gang Commune, with less paddy and more dry fields under cultivation, raises both water buffalo and yellow cattle for draft purposes.

The poultry information obtained in China is fragmentary at best. Ducks and geese, of course, play a far more important role in the poultry sector than in the United States. For example, at the Red Star China-Korea Friendship Commune, 140,000 ducks are delivered annually from the commune's three duck farms to the Peking market.

Poultry production is obviously a serious business on the two Shanghai communes. The Horse Bridge Commune, with 240,000-odd chickens, ducks, and geese, raises foundation stock of 4-day-old chicks that are distributed downward, on a contractual basis, to production brigades and teams. Individual workers may buy such breeding stock.

A flock of Australian Blacks—large, 6-month-old white chickens, about to lay—was observed at the Horse Bridge Commune, as well as some 2-month-old Shanghai Whites, which were being kept under carefully recorded observation for 5 months.

These geese and ducks appeared to be in excellent condition. Their offspring were distributed to lower levels as well as at the commune level.

At the July 1 Commune, there were foundation flocks of very large Australian Blacks and smaller, brown Shanghai Reds. The latter are preferred for their meat. Their growth is slower, and as a result, some crossing of the two breeds has been carried out.

The annual hatch at the July 1 Commune is about 200,000 chicks from eggs incubated at 39 degrees centigrade for 21 days. The chicks are sold to commune members for about 12 U.S. cents apiece. Members are charged about 2 U.S. cents per egg for private use of the commune incubator. Ducks and geese also are bred at the commune's facilities.

A good deal of generalizing is heard on the subect of China's livestock feeding practices—"no grain is fed," "some grain is fed," "only scraps and trash are fed," are some of the frequently heard observations. It is likely, however, that much more grain is consumed for feed in China than is generally believed to be the case.

BECAUSE China's major livestock numbers probably approach or exceed 500 million and poultry 1-2 billion or more, the question of grain consumption—on however small a scale it may take place—becomes an extremely important factor when attempting to account for China's grain disappearance —not to mention its production.

For this reason, special emphasis was placed on questions of feeding practices, the use of grain in feeding, formula feeding, and related questions. The information developed at each commune is piecemeal at best—as it has been in other attempts at systematic inquiry. But there are a few pieces of the puzzle and some indications that point to a wider use of grain in feeds than some have believed previously—at least insofar as reflected by the limited sample of communes visited.

At the Red Star China-Korea Friendship Commune, hogs are fed white potatoes and other vegetables, and mixed grains including *kaoliang* (sorghum), corn, barley, rice, or wheat husks.

THE COMMUNE operates a feed mill in which these three grains and husks are mixed, ground, bagged, and sold to the production brigades (which are team-level units on other communes). The formula used is corn, 60 percent; *kaoliang*, 10 percent; barley, 10 percent; husks, 10 percent; and salt and miscellaneous, 10 percent.

Feed for hogs and cattle at the Horse Bridge Commune includes ground barley (probably including naked barley), sweet potatoes, wheat husks, rice husks, vegetables (those parts that are unsuitable for human consumption), melons, and water hyacinths. Water hyacinths were found to be widely used as feed by the U.S. plant scientists' delegation that visited China in September 1974.

Chickens are fed rice husks and rice offal (material remaining after threshing). In addition, mature chickens—apparently not the younger ones—are fed barley.

Dairy cattle, as opposed to other cattle, are also fed barley flour; cottonseed meal; and green vegetables, including sweet potatoes, cabbage, and turnips—all crushed by machine. In the summer, pumpkins and sweet potato vines also are fed.

Chicken feed at the July 1 Commune includes greens (*ch'ing tsai*), barley flour, wheat flour, bran, ground corn, and fishmeal or ground fish bones.

Hog feed was the same as for chickens, except that no corn was included. The ration of feed to weight gain for hogs was given as 7.7 pounds of grain (nongrain feed components were not included) to 2.2 pounds of meat (animal weight).

The need for close mutual coordination in the development of crop production with livestock production was stressed at the Hua Tung Commune—

primarily because of the feed requirements of the commune's livestock, which includes 67,000 hogs, 3,800 water buffalo, and five cattle (for meat) farms.

Feed for the Australian Black chickens included powdered rice husks, fishmeal, and greens. Sweet potatoes—sliced and dried—are used primarily for hog feed.

At the fruit-growing Lok Gang Commune, very little grain was fed to hogs, nor was much grain—comparatively speaking—grown on the commune. Hog feed there is comprised mainly of corn stalks ground and crushed, sweet potatoes and vines, and cassava—which apparently is in plentiful supply in that part of China. Cattle are maintained through grazing and feed of straw, rice husks, and sugarcane leaves.

There are, therefore, a number of feeding practices, and these vary from one type of livestock to another and reflect the types of crops produced at each particular commune. Based on the limited information obtained on the trip, it is doubtful if much livestock or poultry feed is brought in from outside the commune under normal circumstances. The impression is one of self-sufficiency in feed within each commune to the maximum extent possible.

Palm Oil Boom

Continued from page 4

and shortages of hard currency in importing countries.

Palm oil tariff rates applicable to major importing countries other than the United States are changing, and these changes will have their influence on future U.S. imports. Transportation costs are another key factor in determining the direction of palm oil trade.

U.S. palm oil imports are duty-free. As palm oil production increases and bulk oil movement becomes dominant, freight economies increase and shipments become more regular. Palm oil shipping rates to the United States have been below those to Europe, but with the reopening of the Suez Canal and the closing of the London Palm Oil Pool, these rates may equalize and the United States may no longer be as attractive a destination for excess Asian palm oil.

The European Community (EC) applies varying rates of duty to palm oil. No duty applies to palm oil imports from developing, associated countries. The primary producer-exporter in this group is Ivory Coast, although other African countries may prove to be important suppliers at some future date.

The EC now applies a 4 percent duty to palm oil for food imported from nonassociated countries such as Malaysia and Indonesia, and a 2.5-percent rate on palm oil for nonfood use. The EC is obligated to take unlimited supplies of African palm oil duty-free from the associated countries, but Malaysian and Indonesian palm oil remain subject to duty rates of $9 and $15 per ton, respectively.

Japan, the closet market to the major Asian palm oil producer-exporter countries, has placed palm oil under its generalized preferences with a 4 percent duty rate applicable for qualified countries. Because freight rates to Japan are relatively low compared with those to the United States and EC countries, pressure on Japan resulting from increased palm oil production will increase.

Both Japan and the EC face the prospect of increasing pressure from within not to yield again on palm-oil duty reductions demanded by the developing countries. In the EC, associated developing countries do not want duty-free access for nonassociated developing countries. In Japan, soybean and rapeseed crushers are concerned that palm oil imports will seriously curtail domestic crushing.

During the next 5 years, palm oil production is expected to increase by more than 1.5 million tons, reaching about 4.3 million tons by 1980. Virtually all the increase will be from trees that have already been planted. Producing countries probably will seek to export the major share of this increase—perhaps as much as 90 percent.

Where are these oil exports likely to move? Historically, the major markets for palm oil have been the EC, Japan, Iraq, India, and the United States. Because per capita consumption of oil in the EC is already high, it is doubtful if much of the increase in palm oil availabilities can be absorbed there without displacing imports of other oils and/or oilseed. However, to the extent that the reopening of the Suez Canal lowers transportation costs to Europe, it seems reasonable that palm oil will become more competitive in European markets.

Vegetable oil consumption in Iraq, India, Pakistan, and other developing countries is relatively low, and substantial increases in palm oil imports by these countries can be anticipated. But it is not likely that the developing countries will be able to absorb all of the increase in palm oil exports that are now anticipated over the next 5 years. Therefore, it appears that U.S. imports of palm oil will continue to increase at an above-average rate, absorbing a substantial share of world palm oil exports in the next few years.

Early 1975 Palm Oil Exports Maintain Uptrend

Peninsular Malaysia produced 320,443 long tons of palm oil during the first 4 months of 1975, compared with 248,548 tons in the same period of 1974—an increase of 29 percent.

Output of palm kernels at 68,591 tons in the same period was 28 percent above production in the corresponding period of 1974.

Exports of palm oil, totaling 292,512 tons in the first 4 months of 1975, were 28 percent larger than the quantities shipped in the comparable period of 1974. The main destinations were Singapore, the United States, the Netherlands, the United Kingdom, Iraq, and Japan.

Exports of palm kernel oil were 37,603 tons in the first 4 months of 1975 compared with 33,023 tons for the same period of 1974—an increase of 14 percent. Principal destinations were the United Kingdom, the United States, the Netherlands, Singapore, West Germany, and Canada.

A newly formed company is about to construct a palm oil mill complex to process various types of vegetable oil in Malaysia.

Soviet Butter Supplies Tight As Output Dips

TOTAL SOVIET factory butter production from Government-held milk supplies has continued to slump this year, despite some gains made in recent months. Indications are that the butter situation in the USSR is less than promising, and is again somewhat tight this year.

During January-March, total factory butter output slipped 11 percent below that of a year earlier. The sharp decline in January-March resulted from the lack of any increase in milk production and a 1-percent drop in Government purchases of milk from State and collective farms. Average milk yields had declined 3 percent despite an increase in cow numbers.

The slight gains in milk production and Government milk purchases during April were not adequate to break the slump in production. Dairy performance improved in May, however, and milk production and milk purchases both increased by 3 percent. Milk yields improved slightly, and cow numbers rose again compared with a year earlier.

Despite increased Government-held supplies of milk and a subsequent 10-percent jump in butter production in May, total butter output during January-May did not gain enough to recover from the continuing slump.

In June butter output dropped again —by 4 percent—and total butter production during January-June 1975 lagged 24,000 tons, or 4 percent, behind the levels of a year earlier.

Milk production and purchases during the first half of 1975 rose only 2 percent. Cow numbers grew, but milk yields fell.

The drop in milk yields is a direct result of the sharp deterioration in the livestock feed base, caused by the current drought conditions in several parts of the USSR. Prospects for much, if any, improvement in milk yields do not appear to be promising at this time.

The Soviet goal for factory butter output this year has been set at 1.25 million tons—slightly less than actual output in 1974—with an estimated goal (including butter produced on farms) of 1.35 million tons.

Based on performance thus far, fulfillment of this year's goal appears somewhat unlikely. Thus, it is probable that butter imports by the USSR will continue this year and may increase somewhat in order to cope with the tightening butter situation in prospect.

It is not expected, however, that this year's tight situation will reach the serious proportions of early 1973. Because of the unprecedented 230,000 tons of butter imported that year from the European Community, together with rising domestic output, the tight butter situation began to ease off in late 1973 and in 1974.

Wholesale stocks were built up by 57,000 tons in 1973. Retail stocks,

"... it is probable that butter imports by the USSR will continue this year and may increase ..."

which apparently were heavily drawn down in 1972, increased 57 percent in 1973 and reached a level of 102,000 tons. About 100,000 or more tons are unaccounted for. Unless consumption was well above trend, a large share may have gone into noncivilian stocks.

Thus, with the improved domestic supply situation, Soviet butter imports in 1974 dropped to 11,000 tons—closer to normal low levels. Exports continued at the lower levels of the previous 3-4 years.

Per capita butter consumption apparently continued to rise in 1973 and 1974, reaching a peak 5.2 kilograms. To maintain this level in 1975 would require butter supplies of 1.35 million tons—the same level as the estimated goal for butter production this year. However, since prospects for fulfilling this goal presently appear somewhat less than promising, Soviet butter exports this year should be at a low level.

The buildup in butter stocks in 1973 and, perhaps, to a lesser extent, in 1974 would provide some cushion against the possible below-plan output this year. Thus, butter imports this year could remain at about the low level of last year but it is more likely that they will increase somewhat.

The amount of imports would depend greatly on the amount of stock depletion and the need to replenish lowered supplies. If stocks are depleted substantially, imports could be averted. However, the possible availability of low-priced butter again this year—as in 1973—from the EC (because of the continuing large buildup in EC butter stocks) could boost Soviet butter imports to a higher level in 1975.

Recently, the Soviets have placed more emphasis on developing the technology of the butter industry through modern high-performance equipment and machinery. Last year, Soviet butter enterprises were allocated 65 new high-performance production lines. This year the enterprises are slated to receive 95 more, both domestically manufactured and imported.

Together with the new production lines, the Soviet Government plans to supply the industry this year with new, automated packaging machines, both domestic and imported, in order to boost deliveries of butter in packaged form to domestic retail markets. In 1974, output of packaged butter reached 80,500 tons and volume is planned to increase this year to 85,000 tons.

—By ANGEL O. BYRNE, ERS

SOVIET BUTTER PRODUCTION AND TRADE, 1966-74, 1975 PLAN
[In 1,000 metric tons]

Year	Production			Imports	Exports
	Total	Factory	Farm		
1966	1,157	1,042	115	2	54
1967	1,177	1,060	117	2	63
1968	1,164	1,044	120	2	76
1969	1,065	954	111	2	74
1970	1,067	963	104	2	73
1971	1,122	1,022	100	2	24
1972	1,176	1,081	95	6	16
1973	1,350	1,239	111	230	18
1974	1,360	1,260	100	11	18
1975 Plan	[1] 1,350	1,253	[1] 100	(2)	(2)

[1] Estimates. [2] Not available.

Soviet Meat Imports Soared in '74

Soviet imports of meat and meat products rose sharply in 1974 to a record 515,000 metric tons. This was 386,000 tons higher than in 1973 and 218,000 tons more than the previous high in 1954. Imports of slaughter cattle (liveweight) also reached a record level, jumping from 72,000 tons in 1973 to 147,000 tons last year.

The record Soviet imports in 1974 were related to the large quantities of low-priced meat and meat products made available by the European Community, both directly and through a ban on imports, rather than to an acute deficiency in Soviet domestic output and supply. Last year, total meat production in the USSR jumped 1 million tons to a record level and made the largest gain since 1971. Beef, pork, and poultry meat output increased substantially and reached record levels. Mutton production also gained.

As a result of the embargo imposed in mid-1974 by the EC on imports of cattle and beef, East European exporters were forced to turn to the USSR as an alternate market. Soviet imports of total meat and meat products from Hungary alone almost tripled in volume. Furthermore, for the first time reported, the Soviets purchased 66,000 head of slaughter cattle from Hungary and agreed to purchase an additional 85,000 head during the first half of this year.

The bulk of total Soviet imports of meat and meat products last year—a large share of which was purchased from noncentrally-planned countries—consisted of fresh frozen meat (excluding poultry meat) which rose more than eightfold to a record.

France was the major supplier, followed by New Zealand, Ireland (a new supplier), Argentina, and Finland. Fresh frozen poultry meat imports rose 77 percent last year and reached the highest level since 1971. Meat product imports increased 8 percent, despite a 3 percent decline in canned meats.

Soviet livestock inventories, Government purchases of livestock and poultry from collective and state farms, and meat output during the first 5 months of this year made relatively good gains and prospects for 1975 seem promising. Thus, together with the increased supplies from the 1974 record meat output, the record imports of meat and meat products, and, apparently, a substantive buildup in stocks last year, Soviet meat imports in 1975 are not expected to reach the 1974 peak level.

Continuation of deliveries from the 1974 purchases, however, together with a continuation of the USSR as an alternate market for East European cattle and beef exporters, should still hold Soviet imports this year at a relatively high level.

—By Angel O. Byrne, ERS

SOVIET IMPORTS OF MEAT AND MEAT PRODUCTS

Year	Total meat and meat products	Frozen fresh meat	Frozen fresh poultry meat	Canned meat	Canned meat with vegetables
	1,000 tons	*1,000 tons*	*1,000 tons*	*Million cans*	*Million cans*
1970	165	82	61	29	29
1971	225	116	87	29	23
1972	131	40	45	77	42
1973	129	46	43	77	25
1974	515	396	76	75	26

Soviets To Up Urea and Mixed Feed Output

Two of the most serious problems facing the Soviet livestock industry are its chronic shortage of mixed feed and insufficient supplies of protein in livestock rations. The Soviets are increasingly turning to synthetic sources of protein, such as urea, to improve the quality of their mixed feeds.

The Soviet Government recently issued a decree "On Increasing the Use of Urea in Stock Raising." Although the story accompanying the announcement of the decree did not indicate the extent to which urea production will be increased, the Ministry of Procurements is attempting to implement measures to increase the use of urea and molasses in the production of mixed feeds.

The Council of Ministers and the Ministry of the Food Industry have been directed to organize the production of granulated, protein-mineral-enriched, sugarbeet-pulp concentrate by the sugar industry. The sugar industry is to increase production of the concentrate—an important constituent of urea-enriched livestock feeds—to 400,000 tons per year by 1980.

The Ministry of Agriculture has been directed to supply 5 million tons of urea- and molasses-enriched granulated and pelleted mixed feeds annually to collective farms, State farms, and interfarm mixed feed plants by 1980. Several other ministries have been enlisted to design, construct, and deliver equipment for the production of the pulp and mixed feed.

It seems likely that the new production goals and increased emphasis on improving the quality and increasing the quantity of mixed feed are designed to support an expanded livestock industry.

—By Judy Goldich, ERS

Soviet Sugarbeet Output Good But Below Plan

Soviet sugarbeet production in 1975 is currently forecast at 85 million tons, 9 million tons below the 1975 plan but 11 percent higher than the mediocre crop in 1974. Dry weather in June and July in several sugarbeet growing areas has reduced crop prospects, but soil moisture levels are above average in the main producing areas of the Western Ukraine. Widespread rains at the end of July probably improved prospects.

Soviet refined beet sugar output from the 1975 crop is forecast at 8-8.5 million tons—somewhat below the revised 1975 plan of 9 million tons—but far above output of 7.1 million tons in 1974/75.

A tight sugar situation in 1974 necessitated sugar purchases of about 300,000 tons in addition to the regular Cuban supply. Imports from Cuba in 1975 are expected to be at about the same as 1974's, about 1.9 million tons (raw value).

Food Samples Big Draw at Warsaw Show

THE OPPORTUNITY to taste-test U.S. food items was one of the attractions that drew a heavy turnout of Polish Government officials—most of them engaged in food importing, purchasing, and dispensing—to the "Today's and Tomorrow's Food Display II" at Warsaw's Europejski Hotel in May. They also had the chance to meet the 33 exhibitors—15 of them company representatives—whose offerings included dried fruits, juices, nuts, popcorn and olives, meat and poultry products, and frozen bakery goods and convenience foods—as well as to attend a seminar on textured soy protein.

Conducted by the Agricultural Attaché, the exhibit opened with a VIP reception on May 20, attended by the U.S. Ambassador, U.S. Agricultural Attaché James A. Hutchins, Jr., Polish dignitaries, members of the local press, and representatives of the firms exhibiting products. The display, open only to invited guests, ran the 3 following days and—with the reception—attracted 197 Polish Government representatives. This is considered an excellent attendance and included many key people in some phase of Poland's food industry.

Thirty-two persons attended the American Soybean Association's textured soy protein seminar. Many aspects of the product were examined, with particular attention being given to regulations governing the use of textured protein in Western Europe.

The almost continuous flow of hot food samples from the kitchen helped to keep interest in the American products at a high level, allowing guests to sample and resample food items in which they were interested. In addition, each person attending was handed a gift parcel, containing a sample of most of the displayed items, for consumption at home.

For the second year in a row, the exhibit proved to be a strong magnet, attracting many in Poland's food industry. Tentative plans are being made to schedule a third display in Warsaw next year.

From top: Irena Sekulska, reporter for Warsaw newspaper, examines display of U.S. food products at the "Today's and Tomorrow's Food Display II" in Warsaw, May 20; a group of Polish food industry officials and U.S. embassy personnel; and visitors sample U.S. citrus juices at one of the display stands with Eric Spira (back to camera), an American exhibitor.

CROPS AND MARKETS

TOBACCO

U.K. Cigarette Prices Raised Again

In the United Kingdom, Rothman-Carreras recently followed the lead of other major tobacco firms, Imperial and Gallaghers, raising recommended retail cigarette prices 1 penny (2.4 U.S. cents) per pack. This concludes the third round of price increases since January.

Driven up by rising tobacco taxes and manufacturers' costs, U.K. retail cigarette prices are now about 25 percent above January 1, 1975, levels. Most king-size filter brands now sell for 46 pence ($1.10) per pack of 20 cigarettes. As a result, consumers will likely favor smaller size cigarettes, and the demand for raw leaf may soften slightly in this major tobacco market.

U.S. unmanufactured tobacco exports to the United Kingdom were 94.3 million pounds in 1974. For January-May 1975, exports to the United Kingdom are down about 25 percent from the comparable period in 1974.

Turkish Tobacco Crop Near 1974 Level

In Turkey, the 1975 Aegean oriental tobacco crop is estimated at about 290 million pounds, similar to the 1974 crop, which was the largest in recent years. Cool, wet weather in the growing area has made leaves heavy and aggravated blue-mold damage, so crop quality will be reduced.

The Aegean crop accounts for about two-thirds of Turkish production, and provides most of Turkey's export-grade oriental. The principal export destination is the United States, which imports over half its oriental tobacco needs from Turkey—about 110 million pounds annually.

Austria Nixes Cigarette Warnings

In Austria, a bill proposing a health warning on cigarette packs was recently defeated in Parliament. Starting in 1976, however, tar and nicotine content figures will be mandatory on each pack of Austrian-manufactured brands.

COTTON

World Cotton Area Below 1974's Plantings

Cotton planting now nearing completion in Northern Hemisphere countries continues to point to a drop in 1975/76 world cotton area of a little over 4 million acres, about 6 percent below the 1974/75 level. The United States, Mexico, Central American countries, and Turkey have reported the sharpest decreases. An important exception is a 200,000-acre increase in the USSR, currently the world's largest cotton producer, where its sixth consecutive bumper crop could materialize.

Most Northern Hemisphere crops are progressing normally in generally satisfactory weather, although less favorable conditions have been reported in Mexico, northern Brazil, and parts of Pakistan. Particularly favorable weather in the Eastern Mediterranean may permit an early harvest and good yields in some of the important cotton-producing countries of that region, including Greece, Turkey, Syria, Iran, and Egypt, which produce around a tenth of the world total.

FRUITS, NUTS, AND VEGETABLES

Italian Deciduous Fruit Outlook Varies

Italian **peach** output for 1975 is forecast at 1,150,000 metric tons, 8 percent less than last year's. The reduction in peach production was caused mainly by adverse weather conditions during fruit setting, especially in the Campania area.

Tonnage of cling variety peaches is forecast at 233.000 metric tons, nearly a third less than that of a year ago. The export outlook for all peaches is favorable.

Forecast of Italy's 1975 **apricot** crop is set at 87,500 metric tons, 24 percent below the previous year's. This decrease in output is attributed primarily to adverse weather conditions in Campania. Grower prices are favorable and apricots destined for fresh consumption ranged from $303 to $455 per ton, while apricots headed for processing ranged from $197 to $212 per ton.

Estimated **plum** production for 1975 is placed at 123,000 metric tons, down 7 percent from last year's.

Based on unofficial but reliable sources, the 1975 **apple** harvest is projected at 2,093,000 metric tons, up by 11 percent from 1974's.

Italy's **cherry** harvest for 1975 is forecast at 175,000 metric tons, an increase of 26 percent over last year's and the highest since 1971. Quality of cherries is considered poor, with much small-sized fruit. Grower prices for 1975 are running about 40 to 70 percent lower (depending on variety) compared to those of a year ago. Exports are expected to be greater than 1974's.

Italian Tomato Output Falls

Total 1975 fresh production of Italian tomatoes is preliminarily estimated at 3,020,000 metric tons, down 7 percent from a year ago. The 1975 tonnage destined for processing is also expected to be lower than last year's.

The reduced output is the result of unfavorable 1975 contract prices for processing tomatoes. In northern Italy, which accounted for most of the reduction in planted acreage, 1975 grower prices for tomatoes destined for paste processing were established at about $65.10 per ton, roughly the same as last year's level.

On the other hand, 1975 grower prices for tomatoes heading for canned whole processing were set at about $81.80 per ton, down from last year by 10 percent.

In Campania, the southern region, 1975 planted acreage remained almost unchanged from last year's and prices processors are willing to pay growers were reportedly about $106 per ton, 28 percent less than last year's.

Carryover stocks are still higher than normal. The current export market seems to be dominated by price considerations and the export outlook for the 1975 crop is not favorable.

Greece Ups Area, Output Of Processing Tomatoes

Reacting to favorable grower prices in 1974, Greek farmers have increased the 1975 area for processing tomatoes to about 19,500 hectares, up 11 percent from the previous year. Production of fresh tomatoes for processing is forecast at 1.05 million metric tons, an increase of 14 percent from a year ago.

Growers are not satisfied with the Government-announced minimum price of $46.70 per ton to be paid by processors for the 1975 crop. Also, the Government subsidy for the 1975 crop has been eliminated. The 1974 minimum price was set at about $38.40 per metric ton, with an added Government subsidy of about $8.30 per ton. The actual average price the processors paid growers in 1974 was an equivalent of $43.30 per metric ton (excluding Government subsidy), 13 percent above the minimum price.

Because growers have demonstrated strongly against the 1975 minimum price, claiming it is not sufficient to cover production costs, the Government has indicated it may meet the growers' demands. Thus, a farm subsidy may be reinstated.

Currently both growers and processors are pessimistic because of large unsold stocks and low international prices of tomato products. Stocks of tomato paste are now reported at 45,000 metric tons.

EC Suspends Tariffs On Dates, Cranberries

The Council of the European Community has announced a temporary suspension of the tariff duties on 08.01A dates for repacking, 08.01A dates for processing, and 08.10B frozen cranberries. The suspension of duties is effective from July 1, 1975, to June 30, 1976. The normal duty rate for dates was 12 percent ad valorem, and for frozen cranberries, 20 percent ad valorem.

SUGAR AND TROPICAL PRODUCTS

World Cocoa Grindings Drop

Reflecting high cocoa and sugar prices and generally unfavorable economic conditions in major cocoa-consuming countries, world cocoa bean grindings during 1975 are expected to be well under the 1974 level of 1.46 million tons.

The U.S. cocoa bean grind during the first half of 1975 totaled only 95,255 tons, off nearly 25 percent from the 126,372 tons recorded in the corresponding 1974 period. U.K. grind during the first 6 months amounted to 38,303 tons, representing a decline of nearly 29 percent from the first half of 1974's total of 53,645 tons. French grindings fell by 13 percent to 17,930 tons, compared with January-June 1974 grindings of 20,545 tons. The Netherlands first-half grind totaled 60,680 tons, off 1.3 percent from the 6-month 1974 level of 61,460 tons.

West German grindings, however, showed an increase of 7.6 percent to 74,137 tons, from 68,877 during the corresponding 1974 6-month period. The higher German grind level was partially due to a leading chocolate manufacturer being closed for the summer holidays in June of 1974, whereas a later holiday closing was scheduled for this year.

India To Increase Cocoa Production

India harvested a cocoa bean crop of about 100 metric tons in 1974—a level the Government hopes will rise to 1,000 tons by 1981 through planned acreage expansion. Currently there are about 4,500 acres under cocoa cultivation—2,000 acres in Karnataka, 1,800 in Kerala, and about 700 in Tamil Nadu. India plans to have 20,000 acres under cocoa cultivation by 1978/79.

Since India's cocoa bean imports have amounted to about 800 tons annually in recent years, minor exports could be possible when the trees come into full production.

India's Tea Output Sets Record

India's 1974 tea harvest was a record 492,000 metric tons, about 5 percent above the 1973 crop of 470,000 tons. Indian tea exports in 1974 amounted to 205,909 tons, valued at $236 million, compared with 1973 shipments of 188,192 tons, valued at $178 million.

Tea harvesting during the first 4 months of 1975 totaled 49,120 tons, down slightly from 50,800 harvested during the corresponding 1974 period. The reduction is a result of dry weather in the northern tea areas.

U.S. imports of Indian tea in 1974 totaled 7,495 tons, valued at $8.6 million, compared with 1973 imports of 8,225 tons valued at $8.4 million. This amounted to less than 10 percent of total U.S. team imports last year—a record 80,846 tons, valued at $79.3 million.

Bangladesh Raises Price For Jute Crop

On July 6, Bangladesh announced a floor price of Taka 90 per maund (about 8 U.S. cents per lb) for the fiscal 1976 jute crop, now being harvested. The floor price is for cross-bottom jute (lowest quality) and compares with a floor price of Taka 60 last year. The Government hopes that the current floor price will encourage growers to plant more jute next year and that it may help to keep jute from being illegally exported to India. Higher quality jute should bring Taka 100-105 per maund.

Earlier in the year, the Government issued its jute policy for fiscal 1976, but omitted a floor price. It now appears that the announcement of the floor price was delayed until the Taka was devalued on May 16 from Taka 8 to Taka 13 per U.S. dollar. Reportedly, lower export prices for raw jute as a result of the Taka devaluation has brightened export prospects and increased optimism in the local jute trade.

GRAINS, FEEDS, PULSES, AND SEEDS

Rotterdam Grain Prices and Levies

Current offer prices for imported grain at Rotterdam, the Netherlands, compared with a week earlier and a year ago:

Item	Aug. 4	Change from previous week	A year ago
	Dol. per bu.	*Cents per bu.*	*Dol. per bu.*
Wheat:			
Canadian No. 1 CWRS-13.5	5.58	— 9	5.63
USSR SKS-14	(1)	(1)	(1)
French Feed Milling [2]	3.76	—19	(1)
U.S. No. 2 Dark Northern Spring: 14 percent	5.03	—10	5.42
U.S. No. 2 Hard Winter: 13.5 percent	4.95	— 7	5.20
No. 3 Hard Amber Durum	6.40	+28	7.65
Argentine	(1)	(1)	(1)
U.S. No. 2 Soft Red Winter	3.93	— 2	(1)
Feedgrains:			
U.S. No. 3 Yellow corn	3.40	— 8	4.05
French Maize [2]	3.43	+ 1	(1)
Argentine Plate corn	4.19	+ 1	4.18
U.S. No. 2 sorghum	3.13	+ 7	3.78
Argentine-Granifero sorghum	3.15	+ 8	3.82
U.S. No. 3 Feed barley	2.68	+10	3.33
Soybeans:			
U.S. No. 2 Yellow	6.45	— 6	8.87
EC import levies:			
Wheat	1.05	— 9	0
Corn	.64	+ 7	0
Sorghum	.89	—10	0

[1] Not quoted. [2] Basis c.i.f. west coast, England
NOTE: Price basis 30- to 60-day delivery

EC Wheat Subsidy Declines

The European Community wheat export subsidy, which was reintroduced early this year and reached a high of over $58 per metric ton in mid-May, has declined to under $7 per ton for all destinations except Austria, Lichtenstein, Switzerland (about $20 per ton), and those African countries in export zone V (about $27 per ton). The reduction in rebate levels is the result of recent increases in world wheat prices.

PRC Claims Record Summer Grain Harvest

The People's Republic of China (PRC) has claimed a record summer grain harvest with both total output and per hectare yields topping the previous highs. Winter wheat is by far the most important component in the summer grain harvest, which accounts for about a fifth of total grain production and includes fall-sown grains and pulses and spring-sown roots and tubers.

No production figures were released, but increased production was reported for 19 of the 24 Provinces that produce summer grain. Although wheat was not referred to specifically, increased output is implied because all of the northern areas, which together account for 70 percent of the total summer grain acreage, especially wheat, have reported an increase in summer grain production.

DAIRY, LIVESTOCK, AND POULTRY

EC Poultry and Egg Prices Still Low

For the past several months, European Community poultry and egg producers have been complaining about depressed market prices. The cost-price squeeze continues, despite reduced broiler production and lower feed costs during the first 5 months of 1975.

Egg prices in the United Kingdom have been especially depressed, partly as a result of the application of a negative monetary compensatory amount (MCA), which acts as a subsidy on imports. Shipments of eggs from France, for example, have been destroyed because, with the MCA subsidy, they were selling at prices below that of U.K. eggs. In response to Britain's problem, the EC Commission increased the export subsidy on eggs and authorized the United Kingdom to temporarily suspend the MCA on eggs.

EC poultrymen are pushing for more drastic measures to stabilize the industry. They recommend voluntary production limitations financed by the EC and Member States; an efficient system to forecast production; sales promotion and advertising; strict application of the Community preference and safeguard clause; promotion of exports (including increased subsidies); and more EC action in the World Food Program.

Gate Prices Up, Levies Down For EC Turkeys and Parts

Effective August 1, the European Community gate prices on whole turkey, turkey parts, and boned poultry were reduced by about 7 percent, while variable levies were doubled on turkey and turkey parts and increased by 130 percent on boned poultry. The increase in levies is attributed to the difference between grain prices in the EC and the world market.

Total import charges (variable levy plus supplementary levy), as a percent of current New York prices, amount to 35 percent for whole turkey, 28 percent for boneless, skinless breasts, 83 percent for drumsticks, and 171 percent for thighs.

GENERAL

MTN Negotiating Groups Report

The Trade Negotiations Committee of the Multilateral Trade Negotiations (MTN) met July 15 and heard reports by the six negotiating groups and opening statements from a number of countries. U.S. Ambassador Frederick Dent's call for early results was answered by European Community and Japanese emphasis on balanced, global progress.

Both the United States and the EC restated their positions on the question of where agricultural commodities other than grains, meat, and dairy products should be negotiated. This question was reopened in the Agriculture Group meeting a few days earlier, where Argentina proposed a procedure whereby developing countries could begin immediately to table agricultural requests in the Agriculture Group. The Argentine proposal led to a clash over the question of whether to create negotiating subgroups on tariffs and nontariff measures in the Agriculture Group, an issue left unresolved by the May compromise.

U.S. DEPARTMENT OF AGRICULTURE
WASHINGTON, D.C. 20250

PENALTY FOR PRIVATE USE, $300
OFFICIAL BUSINESS

If you no longer wish to receive this publication, please check here ☐ and return this sheet, or addressed portion of envelope in which publication was mailed.

If your address should be changed ☐ PRINT or TYPE the new address, including ZIP CODE, and return the whole sheet to:

Foreign Agricultural Service, Rm. 5918
U.S. Department of Agriculture
Washington, D.C. 20250

FOREIGN AGRICULTURE

POSTAGE AND FEES PAID
U.S. DEPARTMENT OF
AGRICULTURE
AGR 101

U.S.MAIL

First Class

FA UNIVE300UB R 1
UNIVERSITY MICROFILMS
JOY REED SUPVR PERIODICALS
300 N ZEEB RD
MI 48106

Soviet Sunflower Shortfall Could Spur Soybean Imports

A possibility that the Soviet Union may need to purchase soybeans in 1975/76 (July 1-June 30) has been raised by reports of unseasonably dry weather now affecting main Soviet sunflower-growing areas. Preliminary USDA forecasts suggest that Soviet sunflowerseed production this year could fall to 6.3 million metric tons, sharply below the 7.4 million planned and down from 6.76 million in 1974.

Lower supplies of sunflowerseed for crushing from the 1975 crop could shorten Soviet vegetable oil and meal availability in 1975/76, unless oilseed imports are initiated. Soybean import requirements could exceed a million tons, as in 1972, when the Soviet Union purchased 1 million tons of U.S. soybeans, following poor sunflower and soybean harvests.

If crop prospects improve, however, imports appear unlikely, since crushing capacity is limited. The Soviets, however, place a high priority on maintaining maximum crushing in processing facilities, both in the European USSR and in the Far Pacific regions.

During June and July, low soil moisture reserves, accompanied by hot, dry weather over large parts of the major Soviet sunflower-growing areas lowered yield prospects substantially. In late July, however, weather and soil moisture improved, with rain reported in Rostov Oblast, Krasnodar Kray, and the Ukraine. At minimum, this could prevent yields from deteriorating further, and could improve the outlook, provided that the better moisture situation extends appreciably into August.

In 1975, the procurement plan for sunflowerseed of 5.9 million tons is 210,000 tons above the 1974 volume. If production falls to 6.3 million tons, procurement could be nearly a million tons below the plan figure, allowing for seed, moisture, and direct consumption.

The USSR is the world's leading producer-exporter of sunflowerseed and oil. In 1974, seed outturn was 630,000 tons below 1973's record 7.39-million-ton crop. Sunflowerseed oil production in 1974/75 is estimated at 2.6 million tons —240,000 tons below the 2.8 million produced in 1973/74. Exports of sunflowerseed and oil, oil basis, surpassed 500,000 tons in 1974—the largest volume since 1969 when exports exceeded 800,000 tons, oil basis.

Sunflowerseed meal is a major source of protein in Soviet livestock and poultry feed. Output in 1974/75 is estimated at 2.2 million tons, approximately equal to the protein fraction of nearly 100 million bushels of soybeans. Sunflowerseed production from the 1974 crop, however, was down by the protein fraction of 9 million bushels of soybeans.

Vegetable oil output in the January-June 1975 period, as reported by the Ministry of Food Industry, was 1.8 million tons or only 100,000 tons below the record 1974 level. Production for all of 1975, however, is likely to fall a quarter of a million tons or more below the planned level of nearly 3.4 million tons. Butter production was also down 24,000 tons. Protein availabilities, historically below requirements, are also down.

The Soviet Union purchased about 100,000 tons of U.S. soybeans in 1964/65, following the sharply reduced soybean crop of 1964. All but one cargo of soybeans was delivered to the Soviet Far East as a crushing raw material. In 1972, Soviet purchases of U.S. soybeans were made to meet crushing raw material requirements, as well as to replenish near-minimum vegetable oil stocks and fill the continuing need for proteins. Imported soybeans were crushed throughout the USSR.

Cottonseed is also an important Soviet source of oil and meal. Since 1970, cottonseed production has increased from about 3.6 million tons to 5.2 million in 1974. Oil and meal output in 1974/75 is estimated at 700,000 and 2.1 million tons, respectively. A further increase in cottonseed production in 1975 is expected, since practically all acreage is irrigated and not greatly dependent on rain. —By GEORGE WANAMAKER, FAS

SOVIET SUNFLOWERSEED, AREA, YIELD, PRODUCTION, AND TRADE

Year	Area	Yield	Production	Sunflower exports		
				Seed	Oil	Meal
	1,000 acres	*Pounds/ acre*	*1,000 metric tons*	*1,000 metric tons*		
1970	11,834	1,102	6,144	143	351	27
1971	11,120	1,102	5,663	84	379	22
1972	10,858	882	5,048	74	394	26
1973	11,725	1,323	7,385	73	342	—
1974	11,579	1,287	6,761	63	481	—
1975[1]	11,600	1,197	6,300	50	400	—

[1] Forecast.

☆U.S. GOVERNMENT PRINTING OFFICE:1975 211-407/4 1-3